

CLAIMS

Having thus described the invention in detail the following is claimed:

1. A tubular stent for supporting arterial and venous conduits in the human body, the tubular stent comprising:
a longitudinal cylindrical metal base structure having at least two different patterns along its longitudinal length, the patterns joined by struts having a predetermined articulation, the base structure coated by at least two layers having a depth not exceeding ten microns.
2. The stent according to claim 1 wherein one pattern is a closed cell design and a second pattern is an open cell design.
3. The stent according to claim 1 wherein one pattern is a closed cell design and a second pattern is a slotted tube design.
4. The stent according to claim 1 wherein one pattern is a closed cell design and a second pattern is a coil design.
5. The stent according to claim 1 wherein one pattern is an open cell design and a second pattern is a slotted tube design.
6. The stent according to claim 1 wherein one pattern is an open cell design and a second pattern is a coil design.
7. The stent according to claim 1 wherein one pattern is a slotted tube design and a second pattern is a coil design.

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8. A tubular stent for supporting aterial and venous conduits in the human body, the tubular stent comprising:
a longitudinal metal base structure having a multiplicity of different circumferential members interconnected by articulations of varying configuration, the base structure coated by at least two layers having a depth not exceeding ten microns.
9. The stent according to claim 8 wherein open cell and closed cell members are the different circumferential members.
10. The stent according to claim 9 wherein the open cell member is connected to the closed cell member with a W-articulation.
11. The stent according to claim 9 wherein the open cell member is connected to the closed cell member with an S-articulation.
12. The stent according to claim 8 wherein the different circumferential members vary in base metal thickness.
13. The stent according to claim 8 wherein the coatings are of a radiopaque substance.
14. The stent according to claim 8 wherein the coatings are of a biological substance.
15. The stent according to claim 8 wherein the coatings are polymeric.
16. A tubular stent for supporting aterial and venous conduits in the human body, the tubular stent comprising:

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a longitudinal cylindrical metal base structure having a single pattern at each end along the longitudinal cylindrical metal base structure and a different pattern at a mid-portion of the base structure, each pattern joined by an articulation of varying configuration, the patterns coated with at least two layers of a biological substance.

17. The stent according to claim 16 wherein the single pattern at each end of the base structure has a thicker layer of biological substance than the mid-portion.
18. The stent according to claim 16 wherein the end pattern at each end of the base structure is an open cell design and the mid-portion of the base structure is a closed cell design.
19. The stent according to claim 18 wherein the closed cell and open cell pattern is connected by an S-articulation.
20. The stent according to claim 18 wherein the closed cell and open cell pattern is connected by a W-articulation.
21. The stent according to claim 18 wherein the open cell pattern at each end has multiple S-shapes and a straight articulating member, the closed cell pattern connected to the open cell pattern with a complex plus sign articulation.
22. The stent according to claim 18 wherein the open cell pattern at each end has a circle at a mid-portion of the open cell pattern.

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